

IN THE CLAIMS:

Cancel Claims 1-63 without prejudice and substitute attached Claims 64-91:

Claims 1-63. Cancelled

64. A process for making aluminosilicates of zeolite N structure comprising the steps of:
- (i) combining a water soluble monovalent cation, a solution of hydroxyl anions and an aluminosilicate to form a resultant mixture having a pH greater than 10 and a $\text{H}_2\text{O}/\text{Al}_2\text{O}_3$ molar ratio in the range 30 to 220;
 - (ii) heating and stirring the resultant mixture to a temperature of between 50° and the boiling point of the mixture for a time between 1 minute and 100 hours until a crystalline product of zeolite N structure is formed as determined by X-ray diffraction or other suitable characteristic; and
 - (iii) separating the zeolite N product as a solid from the mixture.

65. A process as claimed in claim 64 wherein the water soluble monovalent cation in step (i) is an alkali metal or an ammonium ion or mixtures of these ions.

66. A process as claimed in claim 65 wherein the alkali metal comprises a potassium ion.

67. A process as claimed in claim 65 wherein the alkali metal comprises both a potassium and sodium ion.

68. A process as claimed in claim 65 wherein the monovalent cation comprises both potassium and ammonium ions.

69. A process as claimed in claim 64 wherein the resultant mixture of step (i) also contains a halide.

70. A process as claimed in claim 69 wherein the halide is chloride.

71. A process as claimed in claim 64 wherein the pH of the solution of hydroxyl ions is greater than 13.

72. A process as claimed in claim 64 wherein in step (ii) the resultant mixture is heated to a temperature of in the range 80°C to 95°C.

73. A process as claimed in claim 64 wherein the aluminosilicate has a Si:Al ratio in the range 1.0 to 5.0.

74. A process as claimed in claim 73 wherein the aluminosilicate has a Si:Al ratio in the range 1.0 to 3.0

75. A process as claimed in claim 73 wherein the aluminosilicate is a clay.

76. A process as claimed in claim 75 wherein the clay is kaolin, meta-kaolin or montmorillonite or mixtures thereof.

77. A process as claimed in claim 64 wherein in step (ii) said heating is carried out for a time in the range 2 to 24 hours.

78. A process as claimed in claim 64 wherein the molar ratio of H_2O/Al_2O_3 in the mixture of step (i) is in the range 45 to 65.

79. A process as claimed in claim 64 wherein in step (i) a quantity of solid zeolite N is added to the mixture.

80. A process as claimed in claim 64 wherein caustic liquor remaining in the mixture after step (iii) is re-used as at least part of a solution of anions and cations in step (i) for subsequent production of additional zeolite N product.

81. A process as claimed in claim 66 wherein the amount of potassium utilized is governed by a molar ratio of K_2O/Al_2O_3 in the range of 0.3 to 15.

82. A process as claimed in claim 66 wherein the amount of potassium

utilized is governed by a molar ratio of K_2O/Al_2O_3 in the range of 0.0 to 15.

83. A process as claimed in claim 70 wherein the amount of chloride utilized is governed by a molar ratio of KCl/Al_2O_3 in the range of 0.0 to 15.

84. A process as claimed in claim 67 wherein the alkali metal is sodium and the amount of sodium utilized is governed by a molar ratio of Na_2O/Al_2O_3 in the range of 0.0 to 2.5.

85. A process as claimed in claim 65 wherein the alkali metal is sodium and the amount of sodium utilized is governed by a molar ratio of $NaCl/Al_2O_3$ in the range of 0.0 to 2.8.

86. A process as claimed in claim 70 wherein the amount of chloride utilized is governed by a molar ratio of $NaCl/Al_2O_3$ in the range of 0.0 to 2.8.

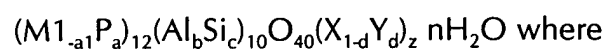
87. A process as claimed in claim 80 wherein the amount of chloride utilized is governed by a molar ratio of Cl/Al_2O_3 in the range of 0.0 to 6.5.

88. A process as claimed in claim 67 wherein the amount of sodium and potassium utilized is governed by a ratio of $K/(K + Na)$ in the range 0.5 to 1.0

89. A process as claimed in claim 67 wherein the amount of sodium and potassium utilized is governed by a ratio of (K+Na-Al)/Si in the range 2.0 to 18.0.

90. Zeolite N produced by the process of claim 64.

91. Zeolite N produced by the process of claim 64 having a composition according to the formula



M = alkali metal or ammonium

P = alkali metal, ammonium or metal cation(s) exchanged in lieu of alkali metal or ammonium

X = halide and Y is an anion and

$$0 \leq a \leq 1, 1 \leq c/b \leq 10, 0 \leq d \leq 1 \text{ and } 1 \leq n \leq 10.$$